Refine Search

Search Results -

Terms	Documents
L13 and 705/35	5

Database:

US Pre-Grant Publication Full-Text Database
US Patents Full-Text Database
US OCR Full-Text Database
EPO Abstracts Database
JPO Abstracts Database
Derwent World Patents Index
IBM Technical Disclosure Bulletins

Search:

Refine Search

Recall Text   Clear   Interrupt

Search History

DATE: Monday, March 20, 2006   Printable Copy   Create Case

Set Name side by side	Query	Hit Count	Set Name result set
	DB=PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD; PLUR=YES; OP=OR		
L18	113 and 705/35	5	L18
L17	"wizard technologies".as.	9	L17
L16	"demirjian, teddy".in.	0	L16
L15	"webwhiz".as.	0	L15
L14	L12 and database and (manipulat$ or manipulate or manipulation) and "user profile" and (rules or regulations or guidelines) and account and "client information" and transaction	51	L14
L13	L12 and database and (view or viewing) and (manipulat$ or manipulate or manipulation) and "user profile" and (rules or regulations or guidelines) and account and "client information" and transaction	49	L13
L12	705.clas.	40392	L12
L11	705/38	972	L11
L10	705/36	1379	L10

L9	705/1	5546	L9
L8	705/35	2340	L8
L7	L6 and (user with profile or user near profile or user adj profile)	23	L7
L6	L5 and (data with bases or databases)	61	L6
L5	L4 and (investor near advisor or investor with advisor or investor adj advisor)	68	L5
L4	(financial near management or financial with management or financial adj management)	6441	L4

DB=USPT; PLUR=YES; OP=OR

L3	(5592379 | 4774663 | 4376978 | 5590037 | 5523942 | 4910676 | 4742457 | 3634669 | 4334270 | 4642767 | 5220500 | 4722055 | 4868376 | 3697693 | 4876648 | 4989141 | 5644727 | 5454104 | 4953085 | 4933842 | 4885685 | 4346442 | 4007355 | 4597046 | 5025138 | 4752877)![PN]	26	L3

DB=PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD; PLUR=YES; OP=OR

L2	('5918217')[ABPN1,NRPN,PN,TBAN,WKU]	2	L2
L1	5918217.pn.	2	L1

END OF SEARCH HISTORY

Patent Assignment Abstract of Title

Total Assignments: 1

Application #: 09658332   **Filing Dt:** 09/08/2000   **Patent #:** NONE   **Issue Dt:**

PCT #: NONE   **Publication #:** NONE   **Pub Dt:**

Inventor: Teddy A. Demirjian

Title: Transaction and account management system

Assignment: 1

Reel/Frame: 011510 / 0332   **Received:** 02/16/2001   **Recorded:** 02/08/2001   **Mailed:** 04/26/2001   **Pages:** 2

Conveyance: ASSIGNMENT OF ASSIGNORS INTEREST (SEE DOCUMENT FOR DETAILS).

Assignor: DEMIRJIAN, TEDDY A.   **Exec Dt:** 01/25/2001

Assignee: WIZARD TECHNOLOGIES, INC.
33 CENTURY RIDGE ROAD
PURCHASE, NEW YORK 10577

Correspondent: KNOBBE, MARTENS, OLSON & BEAR, LLP
THOMAS R. ARNO
620 NEWPORT CENTER DRIVE
SIXTEENTH FLOOR
NEWPORT BEACH, CA 92660

Search Results as of: 3/20/2006 9:31:10 A.M.

Hit List

| Clear | Generate Collection | Print | Fwd Refs | Bkwd Refs |
| Generate OACS |

Search Results - Record(s) 1 through 9 of 9 returned.

☐ 1. Document ID: US 6678434 B1

Using default format because multiple data bases are involved.

    L17: Entry 1 of 9   File: USPT   Jan 13, 2004

US-PAT-NO: 6678434
DOCUMENT-IDENTIFIER: US 6678434 B1

TITLE: Disk drive optical switch

DATE-ISSUED: January 13, 2004

INVENTOR-INFORMATION:
NAME	CITY	STATE	ZIP CODE	COUNTRY
Goodman; Albert	Albuquerque	NM		
Shahinpoor; Mohsen	Albuquerque	NM		

US-CL-CURRENT: 385/16

| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw De |

☐ 2. Document ID: US 6381382 B2

    L17: Entry 2 of 9   File: USPT   Apr 30, 2002

US-PAT-NO: 6381382
DOCUMENT-IDENTIFIER: US 6381382 B2

TITLE: Dynamic multichannel fiber optic switch

DATE-ISSUED: April 30, 2002

INVENTOR-INFORMATION:
NAME	CITY	STATE	ZIP CODE	COUNTRY
Goodman; Albert	Albuquerque	NM		
Shahinpoor; Mohsen	Albuquerque	NM		

ASSIGNEE-INFORMATION:
NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Wizard Technologies, Inc.	Albuquerque	NM			02

APPL-NO: 09/733309   [PALM]

DATE FILED: December 8, 2000

PARENT-CASE:
CROSS-REFERENCE TO RELATED APPLICATIONS This application is a continuation-in-part
application of both U.S. patent application Ser. No. 09/513,663, entitled "Dynamic
Fiber Optic Switch", to Albert Goodman, filed on Feb. 25, 2000, now U.S. Pat. No.
6,181,844 and U.S. patent application Ser. No. 09/513,657, entitled "Dynamic Fiber
Optic Switch with Artificial Muscle", to Albert Goodman and Mohsen Shahinpoor,
filed on Feb. 25, 2000, now U.S. Pat. No. 6,192,171 and the specifications thereof
are incorporated herein by reference.

INT-CL-ISSUED: [07] G02 B 6/26

US-CL-ISSUED: 385/22; 385/16, 385/17, 385/18, 385/52, 385/90
US-CL-CURRENT: 385/22; 385/16, 385/17, 385/18, 385/52, 385/90

FIELD-OF-CLASSIFICATION-SEARCH: 385/16-24, 385/40, 385/8, 385/33-35, 385/50,
385/52, 385/90
See application file for complete search history.

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
4152043	May 1979	Albanese	350/96.2
4204742	May 1980	Johnson et al.	350/96.2
4204744	May 1980	Wittmann	350/96.2
4303302	December 1981	Ramsey et al.	350/96.2
4415228	November 1983	Stanley	350/96.2
4512036	April 1985	Laor	455/612
4512627	April 1985	Archer et al.	350/96.2
4543663	September 1985	Laor	455/600
4580292	April 1986	Laor	455/607
4651343	March 1987	Laor	455/600
4652081	March 1987	Fatatry	350/96.2
4657339	April 1987	Fick	385/16
4759597	July 1988	Lemonde	350/96.2
4790624	December 1988	Van Hoye et al.	350/96.26
4844577	July 1989	Ninnis et al.	350/96.29
4886335	December 1989	Yanagawa et al.	350/96.2
4969709	November 1990	Sogawa et al.	350/96.26
5004318	April 1991	Ohashi	350/96.2
5024497	June 1991	Jebens	350/96.2
5175776	December 1992	Lee	385/16
5214727	May 1993	Carr et al.	385/22
5216729	June 1993	Berger et al.	385/31
5261015	November 1993	Glasheen	385/23
5524153	June 1996	Laor	385/16
5647033	July 1997	Laughlin	385/16

5699463	December 1997	Yang et al.	385/22
5781672	July 1998	Cutts	385/22
5808472	September 1998	Hayes	324/671
5812711	September 1998	Glass et al.	385/37
5841912	November 1998	Mueller-Fiedler et al.	385/7
5870518	February 1999	Haake et al.	385/90
5915063	June 1999	Colbourne et al.	385/140
6044186	March 2000	Chang et al.	385/23
6181844	January 2001	Goodman et al.	385/16
6192171	February 2001	Goodman et al.	385/16

FOREIGN PATENT DOCUMENTS

| FOREIGN-PAT-NO | PUBN-DATE | COUNTRY | CLASS |
| 3338051 | February 1985 | DE | |

OTHER PUBLICATIONS

Shahinpoor, M. et al. "Ionic Polymer-Metal Composites (IPMCs) as Biomimetric Sensors, Acutators and Artificial Muscles--A Review" Smart Mater. Struct. 7 (1998) R15-R30.

ART-UNIT: 2874

PRIMARY-EXAMINER: Sanghavi; Hemang

ATTY-AGENT-FIRM: Mays; Andrea L. Peacock; Deborah A. Myers; Jeffrey D.

ABSTRACT:

An apparatus and method of optical switching wherein a plurality of individual activation strips (18) are adhered longitudinally upon an optical channel, such as an optical fiber (14) to cause the fiber to undulate in 21/2 dimensions when the activation strips are activated. The activation strips are activated with a constant or varying electrical source and are located at the free end of the optical fiber. Contraction and expansion of respective activation strips causes a free end of the optical fiber to be displaced or to undulate. A multichannel switch (100) operates by moving the free end of the selected input fiber and the free end of the selected output fiber toward one another so that the signal is sent from the input to the output fiber.

29 Claims, 22 Drawing figures

| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw D |

☐ 3. Document ID: US 6181844 B1

L17: Entry 3 of 9   File: USPT   Jan 30, 2001

US-PAT-NO: 6181844
DOCUMENT-IDENTIFIER: US 6181844 B1

TITLE: Dynamic fiber optic switch

DATE-ISSUED: January 30, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Goodman; Albert	Albuquerque	NM		
Shahinpoor; Mohsen	Albuquerque	NM		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Wizard Technologies, Inc.	Albuquerque	NM			02

APPL-NO: 09/513663   [PALM]
DATE FILED: February 25, 2000

PARENT-CASE:
This application claims the benefit of the filing of U.S. Provisional Patent
Application Ser. No. 60/121,778, entitled "Dynamic Fiber Optic Switch and Fiber
Optic Cable Switch," filed on Feb. 26, 1999, and the specification thereof is
incorporated herein by reference.

INT-CL-ISSUED: [07] G02 B 6/26

US-CL-ISSUED: 385/16; 385/19, 385/20, 385/22
US-CL-CURRENT: 385/16; 385/19, 385/20, 385/22

FIELD-OF-CLASSIFICATION-SEARCH: 385/16, 385/19, 385/20, 385/22, 385/23, 385/24,
385/25
See application file for complete search history.

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
4223978	September 1980	Kummer et al.	350/96.2
4303302	December 1981	Ramsey et al.	385/16
4415228	November 1983	Stanley	350/96.2
4512036	April 1985	Laor	455/612
4512627	April 1985	Archer et al.	350/96.2
4543663	September 1985	Laor	455/600
4651343	March 1987	Laor	455/600
4759597	July 1988	Lemonde	350/96.2
4790624	December 1988	Van Hoye et al.	385/118
4844577	July 1989	Ninnis et al.	350/96.29
4886335	December 1989	Yanagawa	350/96.2
5004318	April 1991	Ohashi	350/96.2

5024497	June 1991	Jebens	385/16
5187758	February 1993	Ueda et al.	385/16
5311410	May 1994	Hsu et al.	362/20
5524153	June 1996	Laor	385/16
5647033	July 1997	Laughlin	385/16
5699463	December 1997	Yang et al.	385/22
5812711	September 1998	Class et al.	385/37
5841912	November 1998	Mueller-Fiedler et al.	385/7

ART-UNIT: 284

PRIMARY-EXAMINER: Sanghavi; Hemang

ASSISTANT-EXAMINER: Cushwa; Benjamin

ATTY-AGENT-FIRM: Peacock, Myers & Adams

ABSTRACT:

An apparatus and method of optical switching wherein a plurality of activation strips (18) are adhered longitudinally around an optical channel, such as an optical fiber (14) to cause the fiber to undulate in 21/2 dimensions when the activation strips are activated. The activation strips are activated with a voltage source. By varying the polarity of the activation strip itself or the source used to activate the activation strip, the optical fiber can be caused to undulate by contraction and expansion of respective activation strips.

22 Claims, 13 Drawing figures

| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw D |

☐   4.   Document ID: AU 2002227097 A8, WO 200244899 A1, US 20020087966 A1, AU 200227097 A, EP 1346284 A1, JP 2004523821 W, MX 2003004905 A1

L17: Entry 4 of 9   File: DWPI   Sep 15, 2005

DERWENT-ACC-NO: 2002-480084
DERWENT-WEEK: 200569
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TITLE: Enabling method in computer system for the development of installation software using screen question to solicit information from user and providing links to next questions if additional information is required

INVENTOR: MORGAN, E; WIGINTON, M ; WIGINGTON, M

PATENT-ASSIGNEE: MORGAN E (MORGI), SUMMIT CONSULTING GROUP LTD (SUMMN), WIZARD TECHNOLOGIES LLC (WIZAN), WIZARD TECHNOLOGIES INC (WIZAN), WIGINTON M (WIGII)

PRIORITY-DATA: 2001US-0998415 (November 29, 2001), 2000US-250189P (November 30, 2000)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
AU 2002227097 A8	September 15, 2005		000	G06F009/455
WO 200244899 A1	June 6, 2002	E	029	G06F009/455
US 20020087966 A1	July 4, 2002		000	G06F009/445
AU 200227097 A	June 11, 2002		000	G06F009/455
EP 1346284 A1	September 24, 2003	E	000	G06F009/455
JP 2004523821 W	August 5, 2004		045	G06F009/445
MX 2003004905 A1	November 1, 2004		000	G06F009/455

DESIGNATED-STATES: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE
DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS
LT LU LV MA MD MG MK MN MW MX MZ NO NZ PH PL PT RO RU SD SE SG SI SK SL TJ TM TR TT
TZ UA UG US UZ VN YU ZA ZW AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU
MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZM ZW AL AT BE CH CY DE DK ES FI FR GB GR IE
IT LI LT LU LV MC MK NL PT RO SE SI TR

APPLICATION-DATA:

PUB-NO	APPL-DATE	APPL-NO	DESCRIPTOR
AU2002227097A8	November 30, 2001	2002AU-0227097	
AU2002227097A8		WO 200244899	Based on
WO 200244899A1	November 30, 2001	2001WO-US45228	
US20020087966A1	November 30, 2000	2000US-250189P	Provisional
US20020087966A1	November 29, 2001	2001US-0998415	
AU 200227097A	November 30, 2001	2002AU-0027097	
AU 200227097A		WO 200244899	Based on
EP 1346284A1	November 30, 2001	2001EP-0996054	
EP 1346284A1	November 30, 2001	2001WO-US45228	
EP 1346284A1		WO 200244899	Based on
JP2004523821W	November 30, 2001	2001WO-US45228	
JP2004523821W	November 30, 2001	2002JP-0546999	
JP2004523821W		WO 200244899	Based on
MX2003004905A1	November 30, 2001	2001WO-US45228	
MX2003004905A1	May 30, 2003	2003MX-0004905	
MX2003004905A1		WO 200244899	Based on

INT-CL (IPC): G06 F 9/445; G06 F 9/455

ABSTRACTED-PUB-NO: US20020087966A
BASIC-ABSTRACT:

NOVELTY - The method involves generating at least one question definition screen.
At least one question is entered on a generated question definition screen to
solicit information from a user. One question answer type is identified for the
entered Question. It is determined whether additional information is necessary to
install the software.

If additional information is necessary, links are provided to next questions to
solicit additional information. If additional information is not necessary, the
entered question is stored.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are included for an apparatus for enabling the development of installation software wizards, for a computer program product and for a method of installing software on a computer system.

USE - For building installation software.

ADVANTAGE - Provides software package to aid in development of wizard to provide installation software for software packages.

DESCRIPTION OF DRAWING(S) - The figure shows the wizard builder application.

ABSTRACTED-PUB-NO: WO 200244899A
EQUIVALENT-ABSTRACTS:

NOVELTY - The method involves generating at least one question definition screen. At least one question is entered on a generated question definition screen to solicit information from a user. One question answer type is identified for the entered Question. It is determined whether additional information is necessary to install the software.

If additional information is necessary, links are provided to next questions to solicit additional information. If additional information is not necessary, the entered question is stored.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are included for an apparatus for enabling the development of installation software wizards, for a computer program product and for a method of installing software on a computer system.

USE - For building installation software.

ADVANTAGE - Provides software package to aid in development of wizard to provide installation software for software packages.

DESCRIPTION OF DRAWING(S) - The figure shows the wizard builder application.

CHOSEN-DRAWING: Dwg.6/7

DERWENT-CLASS: T01
EPI-CODES: T01-J12B; T01-J20; T01-S03;

| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw D |

☐   5.   Document ID: US 6678434 B1, WO 200208814 A1, AU 200180882 A

L17: Entry 5 of 9   File: DWPI   Jan 13, 2004

DERWENT-ACC-NO: 2002-329412
DERWENT-WEEK: 200405
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TITLE: A disk drive optical switch for optically connecting, interrupting or aligning optical fibers in first and second groups includes fixing input fibers in openings of a pivoted actuator arm, and fixing output fibers in openings of a disc

INVENTOR: GOODMAN, A; SHAHINPOOR, M

PATENT-ASSIGNEE: WIZARD TECHNOLOGIES INC (WIZAN)

PRIORITY-DATA: 2000US-0626342 (July 26, 2000)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
US 6678434 B1	January 13, 2004		000	G02B006/26
WO 200208814 A1	January 31, 2002	E	033	G02B006/26
AU 200180882 A	February 5, 2002		000	G02B006/26

DESIGNATED-STATES: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE
DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT
LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA
UG US UZ VN YU ZA ZW AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW
MZ NL OA PT SD SE SL SZ TR TZ UG ZW

APPLICATION-DATA:

PUB-NO	APPL-DATE	APPL-NO	DESCRIPTOR
US 6678434B1	July 26, 2000	2000US-0626342	
WO 200208814A1	July 26, 2001	2001WO-US23838	
AU 200180882A	July 26, 2001	2001AU-0080882	
AU 200180882A		WO 200208814	Based on

INT-CL (IPC): G02 B 6/00; G02 B 6/26; G02 B 6/28; G02 B 6/42; G11 B 5/147;
G11 B 5/17; G11 B 11/00; H01 L 21/301; H01 L 21/46; H01 L 21/78

ABSTRACTED-PUB-NO: WO 200208814A
BASIC-ABSTRACT:

NOVELTY - A group (140) of input fibers (142) are fed through openings in a fixed
support (120) and the output ends are inserted into openings (114) in an actuator
arm (108) of a disk drive (100). A group (144) of output fibers (146) are fed
through a fixed support (136) and their input ends are held in openings (116) in a
disc (102). The actuator arm is moved by a high resolution voice coil motor to
pivot about a motor shaft (110) and the disc is rotated to align selected input and
output fibers.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(a) a method of optical switching including positioning an actuator arm and a disk;

(b) an optical switch including two or more actuator arms

(c) and a method of optical switching using actuator arms.

USE - The disk drive optical switch is used for optically connecting, interrupting
or aligning optical fibers in first and second groups.

ADVANTAGE - The optical switch uses commercially available computer disk drive
assemblies that provide high positional accuracy. The switch is reduced in cost,
reliable, fast acting, flexible in application and has a long operating life. No
collimating lenses or micro mirrors are needed since the fibers are precisely

aligned end-to-end.

DESCRIPTION OF DRAWING(S) - The figure shows a perspective view of a disk drive optical switch.

Disk drive 100

Disc 102

Actuator arm 108

Motor shaft 110

Openings 114, 116

Fixed supports 120, 136

Input fibers 140, 142

Output fibers 144, 146

ABSTRACTED-PUB-NO: WO 200208814A
EQUIVALENT-ABSTRACTS:

CHOSEN-DRAWING: Dwg.1/7

DERWENT-CLASS: P81 T03 V07
EPI-CODES: T03-F02L5; T03-G02A; T03-L05B; T03-N01; V07-G10E;

| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw De |

    ☐   6.   Document ID: US 20010017956 A1, US 6381382 B2, WO 200163330 A1, AU 200145243 A

L17: Entry 6 of 9   File: DWPI   Aug 30, 2001

DERWENT-ACC-NO: 2001-529280
DERWENT-WEEK: 200235
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TITLE: Dynamic multichannel fiber optic switch in fiber optic telecommunication system, has input channels each with activation strip to undulate input channels in specific dimension and align with desired output channel

INVENTOR: GOODMAN, A; SHAHINPOOR, M

PATENT-ASSIGNEE: GOODMAN A (GOODI), SHAHINPOOR M (SHAHI), WIZARD TECHNOLOGIES INC (WIZAN)

PRIORITY-DATA: 2000US-0733309 (December 8, 2000), 2000US-0513657 (February 25, 2000), 2000US-0513663 (February 25, 2000)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
US 20010017956 A1	August 30, 2001		021	G02B006/35
US 6381382 B2	April 30, 2002		000	G02B006/26
WO 200163330 A1	August 30, 2001	E	000	G02B006/26
AU 200145243 A	September 3, 2001		000	G02B006/26

DESIGNATED-STATES: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK
DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU
LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG
US UZ VN YU ZA ZW AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ
NL OA PT SD SE SL SZ TR TZ UG ZW

APPLICATION-DATA:

PUB-NO	APPL-DATE	APPL-NO	DESCRIPTOR
US20010017956A1	February 25, 2000	2000US-0513657	CIP of
US20010017956A1	February 25, 2000	2000US-0513663	CIP of
US20010017956A1	December 8, 2000	2000US-0733309	
US20010017956A1		US 6181844	CIP of
US20010017956A1		US 6192171	CIP of
US 6381382B2	February 25, 2000	2000US-0513657	CIP of
US 6381382B2	February 25, 2000	2000US-0513663	CIP of
US 6381382B2	December 8, 2000	2000US-0733309	
US 6381382B2		US 6181844	CIP of
US 6381382B2		US 6192171	CIP of
WO 200163330A1	December 12, 2000	2000WO-US42814	
AU 200145243A	December 12, 2000	2001AU-0045243	
AU 200145243A		WO 200163330	Based on

INT-CL (IPC): G02 B 6/26; G02 B 6/35

RELATED-ACC-NO: 2001-210262;2001-373411

ABSTRACTED-PUB-NO: US 6381382B
BASIC-ABSTRACT:

NOVELTY - The switch has multi input and multi output channels. An activation strip
provided along longitudinal direction of individual input channel is activated to
undulate the input channel in 2.5 dimension and is aligned with desired output
channel.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for optical switching
method.

USE - For fiber optic telecommunication system.

ADVANTAGE - By activating the actuation strip provided on the input channel, the
desired output channel is aligned with the input channel, and both input and output
optical channels are moved. Hence, the need for additional mechanical units to move
the channel is eliminated. Improves versatility, durability, reliability and design
of optical switch.

DESCRIPTION OF DRAWING(S) - The figure shows a cut-away view of fiber optic switch.

ABSTRACTED-PUB-NO: US20010017956A
EQUIVALENT-ABSTRACTS:

NOVELTY - The switch has multi input and multi output channels. An activation strip
provided along longitudinal direction of individual input channel is activated to
undulate the input channel in 2.5 dimension and is aligned with desired output
channel.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for optical switching
method.

USE - For fiber optic telecommunication system.

ADVANTAGE - By activating the actuation strip provided on the input channel, the
desired output channel is aligned with the input channel, and both input and output
optical channels are moved. Hence, the need for additional mechanical units to move
the channel is eliminated. Improves versatility, durability, reliability and design
of optical switch.

DESCRIPTION OF DRAWING(S) - The figure shows a cut-away view of fiber optic switch.

CHOSEN-DRAWING: Dwg.1/15

DERWENT-CLASS: P81 V02 V06 V07 W01 W02
EPI-CODES: V02-E02; V06-M06D; V06-U; V07-G04; V07-G10C; V07-G15; V07-K01A; W01-B02;
W02-C04A9; W02-C04B1;

| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw D |

   ☐   7.   Document ID: WO 200118714 A2, AU 200073571 A

L17: Entry 7 of 9   File: DWPI   Mar 15, 2001

DERWENT-ACC-NO: 2001-354668
DERWENT-WEEK: 200137
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TITLE: Financial management system for computer implemented account tracking,
processing and management, alters user profile based on information defining system
response in rules database

INVENTOR: DEMIRJIAN, T A

PATENT-ASSIGNEE: WIZARD TECHNOLOGIES INC (WIZAN)

PRIORITY-DATA: 1999US-152920P (September 8, 1999)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
WO 200118714 A2	March 15, 2001	E	039	G06F017/60
AU 200073571 A	April 10, 2001		000	G06F017/60

DESIGNATED-STATES: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK
DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU

LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG
UZ VN YU ZA ZW AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL
OA PT SD SE SL SZ TZ UG ZW

APPLICATION-DATA:

PUB-NO	APPL-DATE	APPL-NO	DESCRIPTOR
WO 200118714A2	September 8, 2000	2000WO-US24604	
AU 200073571A	September 8, 2000	2000AU-0073571	
AU 200073571A		WO 200118714	Based on

INT-CL (IPC): G06 F 17/60

ABSTRACTED-PUB-NO: WO 200118714A
BASIC-ABSTRACT:

NOVELTY - User profile database has stored identification information containing
user specific data manipulation logic and data display format that defines system
operation which correlates with one system users. Rules data base (304) stores
information defining system response corresponding to modification of database
information. The user profile is altered based on defined rules.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(a) Computer readable program having stored instructions;

(b) Transaction management system;

(c) Computerized investment advisor system;

(d) Information management system;

(e) Computerized information management system

USE - For computer implemented account tracking, processing and management.

ADVANTAGE - The system can be web hosted in which system users can interface with
the system using a web browser such as Microsoft explorer or Netscape navigator.

DESCRIPTION OF DRAWING(S) - The figure shows the block diagram of a system for
updating financial information and user profiles of system users.

Rules database 304

ABSTRACTED-PUB-NO: WO 200118714A
EQUIVALENT-ABSTRACTS:

CHOSEN-DRAWING: Dwg.3/11

DERWENT-CLASS: T01
EPI-CODES: T01-J05A;

| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw D |

□   8.   Document ID: US 6181844 B1

L17: Entry 8 of 9   File: DWPI   Jan 30, 2001

DERWENT-ACC-NO: 2001-210262
DERWENT-WEEK: 200121
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TITLE: Optical switch has several activation strips adhered longitudinally around
each of optical input channels to cause input channels to align with desired output
optical channels

INVENTOR: GOODMAN, A; SHAHINPOOR, M

PATENT-ASSIGNEE: WIZARD TECHNOLOGIES INC (WIZAN)

PRIORITY-DATA: 1999US-121778P (February 26, 1999), 2000US-0513663 (February 25,
2000)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
US 6181844 B1	January 30, 2001		013	G02B006/26

APPLICATION-DATA:

PUB-NO	APPL-DATE	APPL-NO	DESCRIPTOR
US 6181844B1	February 26, 1999	1999US-121778P	Provisional
US 6181844B1	February 25, 2000	2000US-0513663	

INT-CL (IPC): G02 B 6/26

RELATED-ACC-NO: 2001-373411;2001-529280

ABSTRACTED-PUB-NO: US 6181844B
BASIC-ABSTRACT:

NOVELTY - The optical switch has several activation strips adhered longitudinally
around each of optical input channels (14,14') to cause input optical channels to
undulate in 2 1 divided by 2 dimensions and align with the desired output optical
channels when strips are activated.

DETAILED DESCRIPTION - The activation strips are selected from the group of
magnetostrictive strips, piezoelectric strips, piezo-polymeric strips, and shape
memory alloy strips. The strips are arranged symmetrically around the input
channel.

An INDEPENDENT CLAIM is also included for method of switching optical channels.

USE - In telecommunication systems.

ADVANTAGE - Provides an efficient and versatile device for switching optical fiber
or fiber optic cable by undulating the cable. Does not require additional
mechanical components beyond the electro or magneto active materials adhered
directly to the fiber.

DESCRIPTION OF DRAWING(S) - The figure shows the two fiber input and spherical segment output having number of fiber outputs.

Optical input channels 14,14'

ABSTRACTED-PUB-NO: US 6181844B
EQUIVALENT-ABSTRACTS:

CHOSEN-DRAWING: Dwg.6/10

DERWENT-CLASS: P81 V06 V07 W01 W02
EPI-CODES: V06-M06B9; V06-M06D; V06-U; V07-G10C; V07-G11; V07-K01; V07-K01A; V07-K03; V07-K04; W01-B02A; W02-C04A9;

| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw D |

□   9.   Document ID: WO 9749525 A1, AU 9732698 A, ZA 9705679 A

L17: Entry 9 of 9   File: DWPI   Dec 31, 1997

DERWENT-ACC-NO: 1998-076990
DERWENT-WEEK: 199822
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TITLE: Abrasive blasting apparatus for cleaning surfaces - has three-way valve member arranged to adjust sizes of both media inlet and ambient air inlet ports whilst communicating with suction outlet port so as to control flow of abrasive media and air through outlet port

INVENTOR: LIVERSEDGE, S C

PATENT-ASSIGNEE: WIZARD TECHNOLOGY LTD (WIZAN), DYER A M (DYERI), HOLNESS A O (HOLNI), LIVERSEDGE S C (LIVEI)

PRIORITY-DATA: 1997ZA-0003967 (May 8, 1997), 1996ZA-0005467 (June 27, 1996)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
WO 9749525 A1	December 31, 1997	E	047	B24C007/00
AU 9732698 A	January 14, 1998		000	B24C007/00
ZA 9705679 A	March 25, 1998		042	B24B000/00

DESIGNATED-STATES: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GE GH HU IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US UZ VN YU ZW AT BE CH DE DK EA ES FI FR GB GH GR IE IT KE LS LU MC MW NL OA PT SD SE SZ UG ZW

APPLICATION-DATA:

PUB-NO	APPL-DATE	APPL-NO	DESCRIPTOR
WO 9749525A1	June 27, 1997	1997WO-GB01733	
AU 9732698A	June 27, 1997	1997AU-0032698	
AU 9732698A		WO 9749525	Based on

ZA 9705679A   June 26, 1997   1997ZA-0005679

INT-CL (IPC): <u>B24</u> <u>B</u> <u>0/00</u>; <u>B24</u> <u>C</u> <u>3/06</u>; <u>B24</u> <u>C</u> <u>5/02</u>; <u>B24</u> <u>C</u> <u>5/04</u>; <u>B24</u> <u>C</u> <u>7/00</u>; <u>B24</u> <u>C</u> <u>11/00</u>; <u>F16</u> <u>K</u> <u>0/00</u>

ABSTRACTED-PUB-NO: WO 9749525A
BASIC-ABSTRACT:

The apparatus comprises a hopper (12) for an abrasive medium e.g. sodium bicarbonate. The hopper vents to the atmosphere and has a lower abrasive media outlet (22). The hopper has a lid (14) formed with a handle (16) and fixed to the body of the container by latches (18). The hopper is formed with a conical base (20) with the lower outlet communicating with a valve assembly (24). The hopper is supported on a skirt (26) which serves as a stabilising stand. The valve assembly is controlled by a valve handle (28) which extends from the skirt and which is connected to the valve assembly via. an adjustment arm (30). A compressed air inlet port (32) for accommodating a compressed air hose and a water inlet port (34) for accommodating a water hose are formed in the skirt.

Similarly an ambient port (36) is provided for accommodating an ambient air hose. The control valve assembly also includes a suction outlet port (54) and an adjustable three-way valve member for allowing selective communication between the inlet and outlet ports. A spray gun assembly (58) is connected to the suction outlet port via. a suction hose. The three-way valve member is arranged simultaneously to adjust the sizes of both the media inlet and the ambient inlet ports whilst communicating with the suction outlet port, thereby controlling the flow of abrasive media and air through the suction outlet port. The spray gun assembly has a venturi chamber which is in turn coupled to a high pressure air hose (44) which creates a venturi effect so as to propel the media from an outlet nozzle via. the suction outlet hose.

ADVANTAGE - Can be easily adjusted to suit different types and sizes of abrasive media. Is also designed to be adjustable so as to be used with a broad range of compressors with various operating pressures and volumes of compressed air outputs.

ABSTRACTED-PUB-NO: WO 9749525A
EQUIVALENT-ABSTRACTS:

CHOSEN-DRAWING: Dwg.1,2/16

DERWENT-CLASS: P61 Q66

| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw D |

| Clear | Generate Collection | Print | Fwd Refs | Bkwd Refs | Generate OACS |

Terms	Documents
"wizard technologies".as.	9

Display Format: [-]   Change Format

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L13: Entry 34 of 49   File: USPT   Mar 18, 2003

US-PAT-NO: 6535855
DOCUMENT-IDENTIFIER: US 6535855 B1

TITLE: Push banking system and method

DATE-ISSUED: March 18, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Cahill; Thomas	Newton	NJ		
Chabra; Steven	New York	NY		
Clowney; Vincent	Chatham	NY		
Cowan; John	New York	NY		
Fitzgerald; Thomas	New York	NY		
Fuertes; Louis	Westport	CT		
O'Connor; Lloyd	Canaan	CT		
Schafer; Randy	New York	NY		
Schmidt; Richard Q.	Huntington	NY		
Slavin; Fred	Manalapan	NJ		
Vayner; Leonid	Brooklyn	NY		
Westerman; Christopher P.	Ridgewood	NJ		
Wynn; Janet	New York	NY		
Velarde; Wil	Brooklyn	NY		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
The Chase Manhattan Bank	New York	NY			02

APPL-NO: 09/052777   [PALM]
DATE FILED: March 31, 1998

PARENT-CASE:
CROSS REFERENCE TO RELATED APPLICATION This application is based on and claims
priority to U.S. Provisional Patent Application Ser. No. 60/067,987 filed Dec. 9,
1997, entitled PUSH BANKING SYSTEM AND METHOD which is hereby incorporated by
reference.

INT-CL-ISSUED: [07] G06 F 17/60

US-CL-ISSUED: 705/1; 340/540, 340/679, 340/870.01, 340/870.16
US-CL-CURRENT: 705/1; 340/540, 340/679, 340/870.01, 340/870.16

FIELD-OF-CLASSIFICATION-SEARCH: 705/35, 705/1, 705/40, 705/76, 705/50, 709/200,
709/217, 340/540, 340/679, 340/870.01, 340/870.16
See application file for complete search history.

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

| Search Selected | Search ALL | Clear |

	PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
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☐	4855906	August 1989	Burke	707/10
☐	4930071	May 1990	Tou et al.	707/4
☐	5167011	November 1992	Priest	706/62
☐	5177342	January 1993	Adams	235/379
☐	5220501	June 1993	Lawlor et al.	380/24
☐	5259066	November 1993	Schmidt	706/50
☐	5262942	November 1993	Earle	705/37
☐	5412753	May 1995	Alston et al.	706/11
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☐	5708422	January 1998	Blonder et al.	340/825.34
☐	5740231	April 1998	Cohn et al.	379/88.22
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☐	5790793	August 1998	Higley	709/218
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☐	5828835	October 1998	Isfeld et al.	709/200
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☐	5919247	July 1999	Van Hoff et al.	709/217
☐	5933816	August 1999	Zeanah et al.	705/35
☐	5978840	November 1999	Nguyen et al.	709/217

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FOREIGN-PAT-NO	PUBN-DATE	COUNTRY	CLASS
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06-324100	November 1994	JP	
WO9423537	October 1994	WO	
WO9727546	July 1997	WO	
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Apr. 1997, "Banks Get Pushy".
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Brochure of Back Web, "Push The Information, the Enterprise . . . ".
Advertisement for "Spatch" by the Hyde Company.
Information Week, Mar. 2, 1998, p. 30, "Battle Is On To Prove Pushes Value".

ART-UNIT: 2161

PRIMARY-EXAMINER: Cosimano; Edward R.

ATTY-AGENT-FIRM: Ostrolenk, Faber, Gerb & Soffen, LLP

ABSTRACT:

A software/hardware system which provides immediate, on-going interaction between an institution and its customers. The system communicates with customers/subscribers over numerous, different communication channels and actively screens market conditions for situations that could potentially impact its customers, based on the customers' unique situation and prearranged instructions. The system and method interacts with the institution's processing centers which

handle incoming customer <u>transactions</u> and the system creates outgoing messages. The system has a decision making component used to make the decision in each case as to which information to push to the customer in the form of a message. The message is delivered to the customer via any communication channels presently known. The system allows the customer to respond electronically or by telephone or by fax or by any means, all of which are intended to allow the institution to receive the response information from the customer expeditiously and to enable the institution to act upon the customer's instructions.

41 Claims, 63 Drawing figures

L13: Entry 34 of 49   File: USPT   Mar 18, 2003

DOCUMENT-IDENTIFIER: US 6535855 B1
TITLE: Push banking system and method

Abstract Text (1):
A software/hardware system which provides immediate, on-going interaction between
an institution and its customers. The system communicates with
customers/subscribers over numerous, different communication channels and actively
screens market conditions for situations that could potentially impact its
customers, based on the customers' unique situation and prearranged instructions.
The system and method interacts with the institution's processing centers which
handle incoming customer transactions and the system creates outgoing messages. The
system has a decision making component used to make the decision in each case as to
which information to push to the customer in the form of a message. The message is
delivered to the customer via any communication channels presently known. The
system allows the customer to respond electronically or by telephone or by fax or
by any means, all of which are intended to allow the institution to receive the
response information from the customer expeditiously and to enable the institution
to act upon the customer's instructions.

Brief Summary Text (3):
Decades ago, financial institutions had the capability of offering service that
could be tailored almost down to the single customer. For example: The Bank of
Smalltown receives through deposit or clearing, a check on the account of valued
customer Jones. The check will cause the customer's account to go into overdraft.
The Bank reaches Jones by phone and advises him of the situation. Jones promises to
come to the Bank that day with a cash deposit sufficient to cover the overdraft. At
three o'clock, closing time for the Bank, Jones has not arrived. The branch
manager, Smith, knows that Jones will honor his promise and assumes he must have
been delayed. He also knows that Jones will suffer if the check is returned (i.e.
returned to the bank of first deposit or to the local depositor--colloquially, the
check will bounce). Smith keeps Jones' account open. Jones arrives at 3:30 p.m. and
apologizes through the locked door to Smith. Smith takes Jones' money through the
slot in the Bank's door and records the deposit. Service on a personal level such
as described above, is largely a thing of the past.

Brief Summary Text (4):
Today, customers have three possible ways to receive information from their
financial service institution. First, a customer can receive paper and/or microform
records shipped to them on a prearranged schedule. Second, the customer can
subscribe to an online service that allows the customer to pull down information
from online databases that are updated on a fixed schedule. In the case of a
corporate customer, the service is called, for example, an "online cash management
system", while in the case of an individual customer, the online system is usually
called a "home banking system". Typically, both of the above systems operate on
intraday or intramonth batching schedules. These systems interleave exceptional
information with everyday reporting, are cumbersome when there is a large amount of
data, are labor intensive, and are prone to delays and missed opportunities unless
managed with close precision by the customer. In essence, the customer gets the
information the bank makes available on the bank's schedule.

Brief Summary Text (5):
In a third method of communication, the bank makes known to its <u>clients information</u>
relevant to their <u>accounts on an account by account</u> basis via telephone. The
contact by phone is labor intensive, and is therefore selectively used. It is also
not reliable since the recipient may not be near the phone and a message recording
device may not be activated.

Brief Summary Text (6):
Reasons for the unavailability, expense or ineffectiveness of such personal
services include the volume of <u>transactions</u> passing through the financial networks,
the number of businesses and persons having one or more <u>accounts,</u> the inability to
precisely pinpoint the exact time when a service or special attention will be
needed by a customer and finally, the inability to reliably communicate bi-
directionally between the customers and the financial service institution at the
point when knowledge of the information is critical.

Brief Summary Text (7):
This last point is especially true in the case of retail customers, individuals,
regarding the reliable delivery of confirmations of receipt of instructions and
confirmation of executed <u>transactions</u>.

Brief Summary Text (15):
The present invention overcomes the limitations of the prior art by providing a
comprehensive, fast, reliable, less expensive notification process for banks or
other institutions with which to communicate relevant information to clients via
messages that represent the considered whole of all the information at the time of
transmission. The information can include a information about a customer's <u>accounts</u>
and personal information of high importance to clients in a reliable and timely
manner.

Brief Summary Text (17):
As a financial services entity, any bank has access to certain customers' financial
information sooner than the customers. Additionally, if customers had earlier
access to some of their <u>account</u> information based on prearranged screening (e.g.
performed by Artificial Intelligence (AI) or other process) of the customers'
situations vis-a-vis some emerging situational information, the customers could
take immediate action in order to correct adverse financial impacts or to otherwise
take advantage of the information. The entirety of the invention does not rest with
the earlier correction of financial issues, but rather relates to the timely
provision of financial information to a customer which enables the customer to take
the earlier action.

Brief Summary Text (18):
The services realized by the present invention range from on-demand payment
services to presenting critical information on a timely basis. The present
invention, referred to herein as Push Banking, is designed to automatically send
information to the customer, with the means for the customer to make the
appropriate response on which the Bank can then act. In contrast, in today's
environment, a customer must affirmatively seek the information and then respond
accordingly. For example, suppose a customer has exceeded the credit-line on his
credit card and has the funds in his checking <u>account</u> to pay off the credit card.
In the prior art system of notification to the customer, the customer's response to
the bank to use funds from the checking <u>account</u> will typically arrive too late. In
contrast, the Push Banking system of the present invention alerts the customer of
the over-limit condition immediately and allows the customer to pay the credit card
overdraft immediately from the checking <u>account,</u> or stop payment in the event of
fraud.

Brief Summary Text (21):
An integral part of the system and method of the invention that implements the

aforementioned service is referred to herein as the Push Active Filter (PAF). The Push Active Filter interacts with the bank's processing centers which handle incoming customer transactions and creates outgoing transactions. The Push Active Filter also interacts with various data banks containing customer account information, transaction histories, current transaction activity, and derived analytical/statistical data as well as external sources of information such as the Internet.

Brief Summary Text (24):
The Push Active Filter consists of two main components: the Push Active Filter Decision Component (PAFDC) and the Push Active Filter Communication Component (PAFCC). The PAFDC receives information input from all the accounts of every client subscribing to this service. Since the number of clients can be very large (millions), the invention provides ready partitioning across physical devices to enable practical implementation of a service with immediate notification capability. The PAFDC contains notification criterion values supplied by each client for use with bank specified conditions to initiate notices to those clients. The PAFDC creates the notices when the specified conditions occur and sends those notices to a corresponding PAFCC for transmission by any channels known by the PAFCC to be effective in reaching the client. By partitioning the clients into groups serviced by PAFDC-PAFCC pairs, scalability to large numbers of clients is assured. Each PAFCC, upon receipt of communications from a client, relays the communication to its corresponding PAFDC and other systems if applicable. Errors detected by the PAFCC are communicated to the PAFDC to cause proper corrective action. The PAFCC also corrects errors and takes corrective action.

Brief Summary Text (25):
The PAFDC periodically runs through the list of clients that it contains and determines if any of the clients should be notified, if any responses from previous notifications have been received, and if any transactions initiated by the PAFDC have been completed. The PAFDC receives account information at a rate that depends on the method of implementation. Three methods of implementation are envisioned, to be used in any combination: 1) account information is sent to the PAFDC on a client whenever a change in the client's account occurs, 2) the PAFDC requests data from an account database when needed, 3) agents of the PAFDC, possessing knowledge of the notification criterion values specified by the clients and located at the relevant data sources, send data on a client to the PAFDC only when a notification condition occurs.

Brief Summary Text (26):
The PAFDC, upon determining that more than one message is to be sent or a message (s) is (are) to be sent and a prior message(s) has (have) been sent that is (are) still pending completion of the required action(s), makes an overall determination of the most appropriate action to take. It may decide that the present condition warrants no new notification(s) because the prior notice(s) is (are) still valid and adequate. It may decide that a new message is required to modify past instructions and/or add a new instruction(s). The preferred embodiment thus makes its determinations in two steps, first deciding on individual accounts, taking into consideration nuances specific to that type of account for that particular client in view of the client's stated preferences. Then, second, it collects all notices generated by the first step and decides what notice(s) should be sent, if any, in light of messages previously sent, but whose intended activity has not been brought to conclusion, as well as considering the possible interaction between newly generated first step notices (e.g. advising to transfer an amount to one account, and to transfer an amount to a second account, when the sum of the two transfers would overdraw the source account).

Brief Summary Text (29):
In order for the client to control which communication channels are used to transmit the messages, the PAFCC maintains a list of channels and priorities that

are settable by the client (e.g. the client may be going on a trip and wants to eliminate messages to his home and designate his mobile unit as the top priority receiver). Because of the difference in message capacity, security and formatting across the range of devices, the PAFCC also maintains a list of device types and formats messages according to the actual capabilities of the target device(s). The PAFDC includes a numeric code with the message that designates a class of communication to the PAFCC that is associated with the account type to which the message pertains, making it simpler for the PAFCC to select the correct communication class. When the PAFDC wants to delete a prior message, such as when a superseding message must be sent prior to receiving a response to an earlier relevant message, a specific value of the numeric code informs the PAFCC to remove the prior message identified by the unique message identifier included in the message.

Brief Summary Text (30):
When a response to a message is received by the PAFDC from a client (via the PAFCC), It reads the response when it next gets to that client in its processing cycle. The PAFDC is able to recognize what message is being responded to by the unique message identifier included in the response that has been copied from the message into the response by the responding mechanism (the identifier copy is provided by the client if the client doesn't possess an automated response mechanism). Client initiated messages have a unique code (e.g. zero) that enables recognizing it as client initiated. If the identifier copy is corrupted, predetermined rules direct the PAFDC how to handle the situation; either accepting the response as genuine with a message to that effect to the client, or requesting confirmation.

Brief Summary Text (31):
When a message has been responded to and the indicated transaction successfully completed or responded to, the PAFDC issues an acknowledgment that requires no response. However the PAFCC checks that the message is received and viewed. This information is kept in the PAFCC's history file for audit purposes.

Brief Summary Text (33):
When the bank is made aware of any situation requiring notification in accord with agreements made with the bank, the PAFDC is informed and a coordinated message is sent in a manner similar to the financially triggered messages described above. Thus the invention anticipates a broader service than traditionally handled by a bank in view of the comprehensive notification process provided by the invention. In fact, the processing of the invention is of a general nature that will be recognized as being applicable beyond just the banking industry. In particular, the applicability of the processing to such well known activities as workflow processing or bill presentment will be seen as benefiting from this new functionality.

Brief Summary Text (34):
When notification to a customer is required, it may require minimal time delay in sending the notice. In order to provide this immediacy of response economically, it may be necessary to interrupt the normal processing cycle described above, which may encompass millions of accounts, to service one or more urgent messages. The preferred embodiment therefore provides this capability by completing the processing of any client it is processing, and then issuing the urgent message and all messages processed up to the time of receiving the urgent message. The urgent message is combined with any other messages already processed for that client. The process then continues processing the remaining clients in its normal order, including the client for whom the urgent message was sent if it had not been processed prior to receiving the interruption.

Detailed Description Text (2):
FIG. 1 is a high level generalized diagram of a typical current banking processing

environment. This Figure depicts the prior art system 10 comprising a processing section 12 which is responsible for processing incoming transactions 14, e.g. money deposits, drafts, orders to pay bills, money transfers, letters of credit and the like. Processed information is output by the processing section 12 as outgoing transactions 16, such as banking statements, notification of various events and the like to banking customers. The bank processing section 12 makes use of information that is looked up or obtained from customers accounts 18, transaction histories 20 and derived analytical and statistical data 22.

Detailed Description Text (8):
The system of FIG. 3 is designed such that the Push Active Filter 30 constantly monitors the results of bank transactions and information obtained from other databases to make decisions whether to "push" information to various customers. Throughout this discussion, the term "Push" will be used to describe the information or messages which is (are) sent (pushed) to a customer. The Push decisions are made, as shall be explained in more detail further on, based on various predetermined information and customer profiles. The key is to get the information to the customer as rapidly as possible, without the customer asking for it. Moreover, the system of the present invention expects, in most cases, to receive an interactive response from the customers to the information that has been presented.

Detailed Description Text (10):
As shown in FIG. 4B, the Push Active Filter 30 awaits a response from the Push Docks 38a-38n of the customers from which it expects to receive such a response over any one of the Push Channels 36n. The Response 46 is communicated over the appropriate Push Channel 36n so that it may be received by the Push Active Filter 30. This information is then transferred to the existing banking system in the form of an incoming transaction 14 which is then processed by bank processing section 12. Any piece of information may be sent over several Push Channels 36a-36n to a customer or several customers. Information received from customers, as illustrated in FIG. 4B, is transformed into standard bank transaction format for input into the bank transaction input stream 14 as its shown in the Figure.

Detailed Description Text (12):
A high-level perspective of the major components and technology architecture of the system of the present invention presented in a different type of layout is shown in FIG. 5A. The system of the present invention includes a system database 19b that includes customer history, transaction history and other data.

Detailed Description Text (13):
FIG. 5B depicts from a high-level perspective, the architecture of the Push Active Filter 30 of the present invention. Push Active Filter (PAF) includes three major components: the Push Active Filter, Decision Component 62 (PAFDC), the Push Active Filter Communications Component 64 (PAFAC), and the Push Active Filter Administration Component (PAFAC) 66. The PAFDC 62 consists of a Bank Transaction Monitor and supporting components which monitors bank transactions and then based on a set of rules creates a "Push". The PAFCC 64 pushes information across a variety of channels to the push Dock and is responsible for communication with the customer in the case of a "Push Response". It is also responsible for determining which channels to use and depending on the customer profiles. The PAFAC 664 administers the customer profiles, customer interest profiles, the Push transaction history, the error message files, the system reports and statistical files.

Detailed Description Text (18):
Business unit systems within an organization (e.g. a bank) are presumed to provide information about customers as a database accessible to all PAFDC 62 instances. It is the responsibility of a particular PAFDC 62 instance to search all accessible databases across all business units to gain the necessary information to process its set of customers, possibly employing intelligent agents located at the

databases. The PAFDC 62 is also responsible for keeping a profile on each customer, identifying the Push Banking wide customer ID with business-unit-specific account numbers or other indicatives.

Detailed Description Text (20):
FIG. 6A depicts the main architectural component of Push Active Filter 30. One of the functions of Push Active Filter 30 is to monitor bank transactions and based upon a set of rules, decide if a customer needs to be contacted, and if so, creates a "Push".

Detailed Description Text (25):
The PAF Administration Component module 66 is primarily responsible for: 1) Maintaining Customer Communication Profiles; 2) Maintaining Push Transaction history files; 3) Reporting on Push Banking Message Traffic and Transactions Generated; and 4) Reporting on Error Situations, Pushes Outstanding and Lapsed Pushes (Pushes which were not responded to before they became "stale.").

Detailed Description Text (27):
The PAFCC 64 employs databases that not only maintain these profiles but also serve to consolidate customers' accounts with a single identifier. The PAFAC 66 also utilizes Push Technology to detect incoming, customer-originated profile updates, issue a challenge-and-response communication and register the updated profile information.

Detailed Description Text (35):
The Security Component 58 of Push Active Filter 30 is an integral design element of the system. Not only does Security Component 58 address all of the well known challenges of the Internet, but also the additional challenges of open wireless and landline communications. From a banking point of view, Security Component 58 preferably may include any of the following security features.

Detailed Description Text (41):
1) Decoy Transmissions. This technique transmits decoy test messages to decoy Docks 38. Here, the present invention discerns attempted spurious Push transactions. Unauthorized personnel can get access to Docks 38 by monitoring Push traffic and transmitting to a Dock 38 directly. A significant amount of traffic is directed at Bank maintained "dummy" Docks 38, so that a unauthorized personnel could be as likely to attempt to remotely penetrate the dummy Dock 38 as a real one and in doing so immediately set off an alarm at the Bank and a series of defensive measures designed to identify and capture the unauthorized personnel.

Detailed Description Text (53):
1) Monitoring accounts, transactions, etc. versus general Push profiles and customer supplied Push profiles (e.g., account is about to go overdraft--do a Push, customer wants to be pushed any debit greater than $100,000, etc.).

Detailed Description Text (59):
PAFDC Decision Maker 69 also includes a Rule Acquisition subcomponent which a) enables it to scan previous days' data and other information to create new decision rules through machine learning and b) accepts operator entered rules (e.g. customer specified Push preferences). PAFDC Decision Maker 69 works in conjunction with the PAF Business rule engine 102 and the business rules database 104 (FIG. 6A) to implement business decision rules.

Detailed Description Text (60):
The Rule Acquisition subcomponent could be represented by a person who maintains the rules and integrates new trends and resolves conflicts with current assumptions.

Detailed Description Text (61):

The PAFDC Situation Monitor 68 is responsible for scanning data available from or received from: 1) customer <u>account</u> files; 2) <u>transaction</u> files; 3) bank-maintained statistical and analytical files; 4) consolidated files and alerts from other banks which relate to the Push Banking System as a concentration bank for a particular customer; and 5) external information sources. When monitoring external data sources, linguistic processing engines may be useful to ensure that messages are triggered in the context the customer intended.

<u>Detailed Description Text</u> (66):
A second component of the PAFDC Decision Maker 69 is a <u>Rule</u> Acquisition system which a) enables it to scan previous days' data and other information to create new decision <u>rules</u> through machine learning and b) accepts operator entered <u>rules</u> (e.g. customer specified Push preferences).

<u>Detailed Description Text</u> (67):
The PAFDC Decision Maker 69 consists in part of a <u>rule</u>-based Artificial Intelligence system using the concepts disclosed in U.S. Pat. 5,259,066 and in the paper Neural Nets v. Expert Systems in Real Time Systems presented at the IEEE Electron/93 International Conference or, depending on the specific implementation, other decision making processes such as <u>database</u> stored procedures or application logic. Scanned data from the Situation Monitor 68 is posted to the Decision Maker 69. The data item is called an attribute in a <u>rule</u> based system and its content is called its value. The output of a <u>rule</u> based system is called an action. Actions are input to the PAFDC Push Packager 70.

<u>Detailed Description Text</u> (68):
Decision processing in the preferred implementation of the invention is <u>rule</u>-based. Each function requiring decision processing is characterized as having a specific set of attributes with defined values that uniquely determine what action the function must perform. As these attributes take on different values, they match one of a set of <u>rules</u> in the function. A <u>rule</u> that matches the set of attribute values is said to "fire", and a <u>rule</u> that "fires" causes the action associated with the <u>rule</u> to be performed.

<u>Detailed Description Text</u> (69):
Each <u>rule</u> is defined as having the form: A*B*C . . . *K, where A,B,C, . . . K represent the attributes that may take on one of two or more discrete values. The operator * represents the logical "AND" function such that the <u>rule</u> is "true" (fires) only if every attribute in the <u>rule</u> simultaneously equals the value specified for the attribute in the <u>rule</u>. Each <u>rule</u> contains only those attributes necessary for the definition of the <u>rule</u>. Thus, attributes omitted from a <u>rule</u> can not influence the firing of a <u>rule</u>.

<u>Detailed Description Text</u> (71):
The <u>rules</u> in a function are mutually exclusive. That is, by design each <u>rule</u> differs from every other <u>rule in the rule</u> set for that function. As long as at least one attribute value in a <u>rule</u> differs from the value of that attribute in another <u>rule,</u> the two <u>rules</u> can not "fire" at the same time. Thus, each <u>rule in the rule</u> set must have at least one attribute in common with each other <u>rule</u> of the set, but with different values for the attribute in common. It is therefore assured that only one action will be performed by the function at any particular point in time. The decision process always makes a uniquely defined decision as to which action should be taken.

<u>Detailed Description Text</u> (72):
Although the <u>rules</u> are mutually exclusive, more than one <u>rule</u> may specify the same action. This provides the logical "OR" function implicitly. Contextual interpretation of the attributes is provided by defining contextual attributes that are set by certain <u>rules</u> and reset by other <u>rules</u>. Incorporation of these contextual attributes in <u>rules</u> provides contextual interpretation of the other

attributes contained within those <u>rules</u>.

<u>Detailed Description Text</u> (73):
The decisions made by Decision Maker 69 are made synchronously with a timing signal
so that the attributes may change values asynchronously between decision time
points with no effect on <u>rule</u> firing. <u>Rules</u> are only permitted to "fire" at the
designated decision time points.

<u>Detailed Description Text</u> (75):
In a preferred embodiment, the <u>rule</u> set is implemented as a decision tree in order
to avoid searching through the <u>rule</u> set for a match. Since the <u>rule</u> set contains
only mutually exclusive <u>rules,</u> a single tree can be constructed with no ambiguity.
The order of occurrence of the attributes in the tree is selected in the order of
increasing generality so that the most efficient tree is built. The attribute
occurring most often in the <u>rule</u> set is placed first, at the root of the tree. This
process is repeated for the remaining attributes, placing the next most frequently
occurring attribute next in order, until the order for all attributes is
established. When more than one attribute occur the same number of times in the
<u>rule</u> set, they are placed in the tree sequentially in arbitrary order following the
previously selected attributes in the order established above. The terminus of each
branch (leaf) designates the action to be performed by the function.

<u>Detailed Description Text</u> (76):
An Automated <u>Rule</u> Acquisition System of Decision Maker 69 operates in batchmode
against the previous period's information (e.g. day, week, month) as it appears
today in the attempt to find Push opportunities that were missed in regular Push
Banking processing.

<u>Detailed Description Text</u> (77):
Further envisioned in the preferred embodiment is self-evolution of the <u>rules</u>. This
is implemented as a set of meta <u>rules</u> that recognize inconsistency between prior
experience and current occurrences. The meta <u>rules</u> embody reasonableness tests to
detect aberrant behavior and the forming of new trends. As new trends are
confirmed, the meta <u>rules</u> provide the instructions for modification of the decision
tree that performs the day-to-day decision processing. The meta <u>rules</u> themselves
are also implemented preferably as a decision tree. The actions invoked by the meta
<u>rule</u> tree cause insertion and deletion of attributes into the day-to-day decision
tree, and edit existing action procedures or create new action procedures that are
selected by the day-to-day decision tree leaves.

<u>Detailed Description Text</u> (78):
The meta <u>rules</u> are particularly sensitive to manual override of the generic
decision processor. This enables the automatic incorporation of changes introduced
on a regular basis by the system operator. Since manual correction normally signals
a change in procedures or other system modification, this automatic adaptation
reduces the required maintenance efforts usually needed for automated decision
processing.

<u>Detailed Description Text</u> (79):
A Manual <u>Rule</u> Acquisition system of the Decision Maker 69 allows direct input of
<u>rules</u> by a duly authorized operator. Such <u>rules</u> are generated prior to the first
operation of Decision Maker 69 through customer submitted Push requirements and at
the introduction of new Banking or Push Banking products and services.

<u>Detailed Description Text</u> (82):
It is possible that a customer has been sent from 1 to n Push messages that may or
may not refer to the same topic. In order to ensure that the most urgent messages
reach a customer first, the PAFDC Prioritizer 71 examines the list of messages that
are currently outstanding (those that have not been responded to) and associates
them by topic and ranks them by priority. It then examines the topic and priority

of the message currently being constructed and assigns a priority to the new message. This is performed by employing decimal fractions, wherein a priority of 0 (not used) means a message should never be sent at all and 1 (not used) means it should have arrived yesterday. Thus, to insert a message in the priority queue between a 0.7 message and a 0.8 message, a value of 0.75 is assigned; to insert between 0.7 and 0.75, a value of 0.725 is used, etc. The PAFDC Push Packager 70 formats the push decision in a way compatible with the transmission requirements of the PAF Communications Component 64. It does this using the "Action" pointers designated by the PAFDC Decision Maker 69 for text message components for the various Push situations. The Push Packager 70 takes the text message components, the customer identification information, and the scanned data and composes a full Push message, which is then passed to the PAF Communications Component 64 for further formatting and transmission in priority order. The Push Packager 70 performs analogous formatting when a Response is translated into a Bank <u>transaction</u> 12. (See FIG. 6A).

<u>Detailed Description Text</u> (89):
Further expanding the notion of bi-directionality, customers are able (depending on the capabilities of their devices) to self-administer their user and interest profiles in a safe and secure manner. Examples of <u>user profile</u> administration include the customer's ability to change its preferred registered device (for example, from pager to PDA) and contact order (for example, send first notification to PDA, second notification to pager, etc.). Examples of interest profiles include the customer's ability to change the topic and relative importance of items of interest (for example, never contact if checking <u>account</u> becomes overdrawn, send highest priority message if Asian markets fall by a given percentage, etc.).

<u>Detailed Description Text</u> (99):
At the next level are docks that support two-way communications and guaranteed delivery. PAFCC 64 can tell if the device has received the message, but not if the client physically has the device. Usually the dock 132a-132d must be polled for status. The order of display is the order of actual transmission. There is usually a service (e.g. a telecommunication system) between the Push system and the dock. Depending on the complexity of the service interface, messages may be canceled or otherwise <u>manipulated</u>. These docks may require new transmissions to keep the customer up-to-date. This is especially true if a response is received after its stale date has been reached.

<u>Detailed Description Text</u> (100):
If a one-way dock is used, the responses are handled by the customer service system. The Customer Service (CS) representative must be able to call up a historical and current <u>view</u> of the message while conversing with the customer. When CS closes a message they have a higher validity than dock messages. For all types of communication, the only way a customer can change its decision is through CS. Docks that cannot guarantee delivery may be retransmitted at a rate determined by an algorithm in the PAFCC 64 distribution system.

<u>Detailed Description Text</u> (101):
For more capable docks, the PAFCC 64 receives acknowledgments and sends three kinds of responses back to the PAFDC 62: 1) response received but the Push is stale, 2) response received, 3) response received and <u>transaction</u> processed.

<u>Detailed Description Text</u> (115):
The Push Dock module 84 is responsible for receiving, validating and storing messages from the Push Active Filter 30 (see FIG. 3). Push Dock 84 and Push Response 82 (which also contains executable code) together enable the customer to <u>view</u> messages and make an appropriate response. This storage functionality is local if the physical device supports persistence storage. Two options exist for available docking space at the Customer end. 1) pre-allocated size--meaning a fixed amount of space for Pushes and Cleanups; or 2) an amount of available space

signaled by system--meaning a variable but not infinite number of Pushes and
Cleanups can be accommodated. Either situation can require a "Dock Full" message
from the Dock 84 to the PAFCC 64 (see FIG. 5A and FIG. 5B).

Detailed Description Text (128):
In block 300, the PAFDC 62 (FIG. 6B) monitors bank transactions, balances, derived
analytical data, public and private data and data supplied to the system by other
banks in its role as the customer's concentration Bank.

Detailed Description Text (129):
In decision block 305, if the PAFDC Decision Maker 69 determines that a situation
satisfies a customer or general Push profile, a Push will be sent. If no push is
necessary, the PAFDC continues to monitor band transactions in step 300.

Detailed Description Text (133):
Decision block 340 determines if the channel is a one-way medium (e.g., pager,
fax). If so, the customer's Push transaction is recorded in that channel and the
process ends in block 345. In this case, the Push consists of "content" only and
has no associated applet. These Pushes ask the customer to reply to a "1-800-"
customer service center with a Push Code. The customer service center automatically
signals the PAFCC 64 that a valid response has been made to that Push. If the
customer does not respond to the Push within a previously agreed time, the
information is re-transmitted. Retransmission stops when the Push goes stale.

Detailed Description Text (139):
In decision block 385, if the Push did not require a customer response, then the
process ends in block 395. Otherwise, the Response is handed back to the PAFDC 62
(FIG. 6B) for formatting as a standard bank transaction in block 390. The PAFDC 62
then enters the transaction into the standard Bank input stream.

Detailed Description Text (140):
FIG. 12 illustrates the process for capturing the customer profiles maintained in
database 106 (FIG. 6A). In step 1600 the profile is received from the customer. In
step 1605, the system assigns the customer a push banking identifier. In step 1610,
all of the customer's account information is retrieved. In step 1615 non-bank
financial information is captured (e.g., accounts at other institutions). In step
1620, the system assigns channels type, category, channel priority level, etc. for
each channel designated by the customer. In step 1625, the system capture non-
financial information, and in step 1630 assigns channels type, category, channel
priority, etc.

Detailed Description Text (146):
In block 425, the customer is alerted to the Push and decides if he/she wants to
view or ignore the Push in decision block 430. If the customer ignores the Push,
the process continues to step 455 after the response is sent with an acknowledgment
code (NO out of block 430).

Detailed Description Text (147):
If customer elects to view the Push (YES out of block 430), the customer
authentication process is initiated in decision block 435, requiring the customer
to enter a PIN or password. If this process is successful (YES out of block 435), a
"Customer Received" acknowledgment is sent back to the bank in block 440. If the
Customer fails after three attempts to enter the correct password (NO out of block
435), then a "1-800-" customer service number, or the like, the Push's serial
number and a message informing of a possible security breach are displayed. The
Push Dock disables itself and destroys any local confidential data. All that
remains of the Dock is a repeat warning at each subsequent system startup of the
possible security breach.

Detailed Description Text (156):

In block 515, the Push information is displayed to the customer. Message authenticity and client/server mutual authentication are delivered through the underlying security protocols. For a dial-in terminal session, Financial Industry and ANSI Secure Sign On standards are operational during the session. For some channels and/or Docks certain transactions may require agreement from the customer, or may not be available for security reasons.

Detailed Description Text (176):
FIG. 14B depicts a screen on a customer's PC which displays all of the available push messages. The customer will subsequently be provided the appropriate functionality to complete the transaction.

Detailed Description Text (178):
FIG. 14D is an illustration of a customer information screen as displayed by the PAF Administration Component 66 (see FIG. 6A) at the bank's facility. This particular screen, and subsequent screens, are used to capture a customer's profile. (See FIG. 12). FIG. 14E is a PAF Administration Component 66 screen which displays details concerning a particular customer. Similarly, FIG. 14F depicts various account information concerning a customer, while FIG. 14G displays a customer non-financial channel profile.

Detailed Description Text (187):
All parties to the trade transaction would benefit from the early remedy approach. The custodian, the investment manager, and the broker would avoid handling an exception case.

Detailed Description Text (190):
Today, Credit Card Issuers bear the majority of the risk of lost and fraudulently used credit cards. Consumers are not liable for unauthorized transactions over $50, and merchants are not liable unless they fail to use online authorization systems.

Detailed Description Text (198):
Banks maintain credit facilities for corporations and financial institutions. In general, numerous transactions flow through the bank's clients' accounts during the day. Although the bank would prefer that all credits would arrive during the earlier part of the day, and debits would be executed during the later part of the day, this isn't how the real world works. What the bank tries to do is to essentially control the flow of funds. The bank executes as many payments as possible within the allowable intraday and overdraft facilities. As the end of day approaches, and debits are held up and credits aren't in the bank, it becomes imperative for the bank to contact its customers. Today the bank calls its customers. This occurs either through the sales force or the client executive. Hopefully, the bank reaches the customer, and depending on the circumstances, the customer wires additional funds or advises the bank of other transactions that are in the process of being executed. Sometimes, the Bank can't reach the customer and payments aren't executed.

Detailed Description Text (205):
Today, a bank advises its customers via phone and PC of the amount of money they need to fund their controlled disbursement account. Many times the calls go unanswered and the funds notifications do not occur. Using the present invention, various methods as described herein can be activated until the bank reaches the customer and notification occurs.

Detailed Description Text (208):
Occasionally large deposits arrive late in the day. If customers are fortunate and happen to be logged onto one of the bank's same day facilities they will be able to invest the funds in the overnight market. More likely, the customer will not be able to execute the transaction.

Detailed Description Text (212):
Bank customers may want to wait for a FX rate before executing an FX transaction.
The customer creates the transaction on the bank's FX system and puts in a wait
order for a rate.

Detailed Description Text (213):
By using the present invention, the customer would get notified of the rate and be
able to send an instruction to execute the transaction with the preferred rate the
customer has selected.

Detailed Description Text (216):
Sometimes a customer receives significant value into its account, either in one
large receipt, or from the accumulation of several credits, perhaps unexpectedly.
The customer may wish to do something with the funds, including investing, paying
down a debt or paying off a vendor.

Detailed Description Text (218):
The present invention enables each customer to establish a global profile (covering
all accounts, world-wide). The profile can include a size-driven threshold for
customer notifications and can in concept bridge accounts, even banking domiciles.
One record per customer (or account) can be established for the notification of
large single credits or cumulative credits which can have value information and
keywords about the remitter and/or the remittance. The customer can enter an exact
amount or a value range, and provide some key words to look for. These records
would last for a set period of time, perhaps established by the customer when he
sets up the keywords. Keywords can be added using the bank's existing cash
management electronic banking system.

Detailed Description Text (223):
In the present invention, customer profiles are created as part of the Push Banking
System. Each time a major event happened, the news service (including currency
movements) would feed the Push Banking System, which would seek out customers with
country/currency exposure above levels indicated in their profile (established by
each customer, either at an account level, or across accounts). A message would be
sent by the "Push Banking" engine advising the customer of the situation/exposure.

Detailed Description Text (230):
The Push Active Filter Decision Component 62 is responsible for processing
information relating to all clients which are part of the PAF30 system. The
processing covers all accounts for those clients, as well as other information of
importance to the client that becomes known to the PAFDC 62. The PAFDC 62 must
assimilate this information and send appropriate messages to the client via the
PAFCC 64. In the event that there are too many clients for one physical processor,
the list of clients may be split into as many lists as necessary to reach a list
size that a processor can cycle through in the time compatible with a promised
level of service. Each list would then be processed by its own processor. If
processors of different capabilities are to be used, the lists can be sized
accordingly, since the system places no requirement for uniform size. The clients
in separate lists must not require any consideration of interrelationships. When
there is a requirement for considering interrelationships between clients, the
interrelated clients are treated as an independent group appearing in one of the
lists. The PAFDC 62 process is organized as shown schematically in FIG. 15.

Detailed Description Text (235):
Done 740 is the normal outcome path of the task 704, however if the end of file is
encountered, the path End of File 739 is followed going to the MainLoop 734j; jump
directive that brings the flow back to label MainLoop 734. Normal flow from Done
740 proceeds to task DecideAction 716 which examines all the data for the client
and determines if a message should be sent and what the message content should be.
If no notice is required, the flow proceeds via outcome No Action 742 to jump

directive Skip 744, which brings the flow to Skip 750 label. If a message has to be sent to the PAFCC 64 (FIG. 6C) for conveyance to the client or as a special instruction to the PAFCC 64, or a transaction has to be initiated, flow proceeds via outcome Action 746 to task SendData 718. SendData 718 transmits the message, if any, to the PAFCC 64, initiates a transaction if needed, and stores the activity in a historical file. Flow then continues from outcome Done 748 to label Skip 750 from which a decision is made on variable End 752 to direct flow via value no 754 to procedure Increment_I 756 or via value yes 762 to MainLoop 760 jump directive that brings the flow back to label MainLoop 734, the latter path signifying the completion of processing of the client list and time to repeat the process, forming an endless loop. Increment_I 756 adds one to the value of variable I that serves as the index for accessing client data in the client list. Flow then proceeds via Loop 758 jump directive that brings the flow back to label Loop 738 to process the next client in the list.

Detailed Description Text (239):
The GetData process 704 obtains external data that is generally applicable to all the clients prior to starting the list of clients and thereafter just obtains client specific data. As seen in FIG. 18, the process begins by checking the value of index variable I 776. Each time the client list processing loop is started, InitSystem2774 (see FIG. 17) sets I to 1 and flow proceeds along value path=1.0 778 to task ObtainMarketData 706. This task reads data from all sources external to the institution employing the PAFDC-PAFCC pair that may have an effect on the decisions to be made by the PAFDC 62 on all clients. Flow then proceeds via outcome Done 780 to label NextRecord 798 and then on to task ObtainSIP DB 708. Task ObtainSIP_DB 708 reads in all traditional data available internally in the institution on one client selected by the index variable I 776. Flow normally proceeds via outcome path Done 782 to task ObtainPAF_PREF_DB 710 which reads in the profile set up by the client (also selected by I) describing what accounts are to produce notifications, how those notifications are to be triggered (notification criteria), and any special notification instructions. ObtainPAF_PREF_DB 710 makes preliminary recommendations about notifications. Flow then proceeds via outcome All values 784 to task ObtainTransactionData 712 which reads in responses to any transactions for the client initiated by the PAFDC 62 at an earlier time if any are pending for the client. Flow then proceeds via outcome Done 786 to task ReceiveResponses 714 which reads in any responses received via the PAFCC 64 from the client or generated by the PAFCC 64 (the PAFCC may send a response indicating it did not receive a response within the allotted time and has cleaned the pending messages out of all channels). Flow then proceeds via outcome All values 788 to outcome Done 740 of task GetData 704. If task ObtainSIP_DB 708 reads an end of file indication then the abnormal outcome End of File 790 path is followed to task GetData 704 outcome End of File 739.

Detailed Description Text (242):
This task is responsible for taking into consideration all the current data obtained on a client in conjunction with the past actions taken. This is accomplished by breaking the decision process into steps. The first step is to examine the responses received, if any. FlagR 810 is set to a value of 1.0 by the ReceiveResponses 714 task if a response is received for the client. If FlagR is not equal to 810 the process flow follows path<>1.0 812 to jump directive Skip 814, which brings the flow to the Skip 816 label. If FlagR 810 equals 1.0 the process flow follows path=1.0 818 to task ProcessResponses 820. ProcessResponses 820 provides any special processing needed to organize the response data for making decisions. Process flow then proceeds via outcome path All values 821 and label Skip 816 to task DecideRecommendation 822. DecideRecommendation 822 reads in the prior actions still pending for the client and further processes the client data to improve on the preliminary recommendations made by ObtainPAF_PREF_DB 710 (see FIG. 18) if needed. Process flow then proceeds via outcome path NoAction 824 to task outcome No Action 742 (see FIG. 16) if no notification to the client or instruction to the PAFCC 64 is required in consideration of the market data, client profile,

responses from the client or PAFCC 64, <u>transaction</u> responses, and pending prior
actions.

Detailed Description Text (243):
When task DecideRecommendation 822 finds there is information that must be
considered, process flow proceeds via outcome path Action 826 to task
CheckOldActions 828, which makes a comprehensive assessment of all the data on the
client for each account of the client for which data is present.

Detailed Description Text (245):
Procedure CheckOldActionsP 900 in FIG. 20A initializes variables for the decision
loop of task 828. Process flow then proceeds to label Loop 902 and then to
procedure IncrementCount 904 which loads the variable AccountType with the next
account type to be processed for that client, loads the variables to be tested, and
adds one to the loop counter Count 906 which is tested against the value of
variable CountEnd. When Count becomes greater than CountEnd, processing is complete
and processing flow passes via path>CountEnd 908 to outcome Done 830 of task
CheckOldActions 828. Otherwise processing flow passes via path<=CountEnd 910 to
test variable AccountType 912. Processing then flows out one of the paths provided
by AccountType 912 such as 401 K 914 or Savings 916 to a decision logic tree
tailored to that type of account, a portion of which is shown for the 401 K type.
The other account types (e.g. Savings 916) have similar logic associates with them.

Detailed Description Text (246):
The first variable tested in the 401 K tree is OldTNLogic 918 which contains a code
representing the type of transaction that had been previously initiated and for
which the PAFDC 62 is expecting an acknowledgment (it should be noted that string
values could be used instead of the numeric values shown, depending on the nature
of the information). In this example 0 represents no transaction had been initiated
for which an acknowledgment is expected. If the value of OldTNLogic 918 is 0, then
processing flow passes via path=0.0 920 to test variable TANLogic 922 which
represents the transaction acknowledgment. TANLogic 922 has a value of 0 when no
acknowledgment is received. If TANLogic 922 has a 0 value processing flow proceeds
via path=0.0 924 to test variable OldRNLogic 926 which contains a code representing
the type of response that had been previously received and for which the PAFDC 62
has not completed processing. In this example 0 represents no prior response is
pending completion. If the value of OldRNLogic 926 is 0, then processing flow
passes via path=0.0 928 to test variable RNLogic 930 which represents a response
just received. RNLogic has a value of 0 when no response has been received. If
RNLogic has a 0 value processing flow proceeds via path=0.0 932 on FIG. 20B, to
test variable OldMNLogic 934 which contains a code representing the type of message
that had been previously sent and for which the PAFDC 62 has not completed
processing.

Detailed Description Text (247):
In this example 0 represents no prior message is pending completion. If the value
of OldMNLogic 934 is 0, then processing flow passes via path=0.0 936 to test
variable MNLogic 938 which represents a message recommended to be sent. MNLogic 938
has a value of 0 when no message is recommended. If MNLogic 938 has a 0 value
processing flow proceeds via path=0.0 940 to jump directive Loop 942, which brings
the flow to the Loop 902 (see FIG. 20A) label to process the next account to be
processed for the client. If MNLogic 938 has a non-zero value processing flow
proceeds via path<>0.0 944 to procedure SendNewMessage 946 which places the
recommended message into a list of messages to be sent. Processing then proceeds to
jump directive Loop 948, which brings the flow to the Loop 902 (see FIG. 20A) label
to process the next account to be processed for the client.

Detailed Description Text (248):
If the value of OldMNLogic 934 is not 0, then processing flow passes vi a path<>0.0

950 to test variable MNLogic 952. If MNLogic 952 has a 0 value processing flow proceeds via path=0.0 954 to procedure CheckTimeout 956 which determines if a response is overdue. The PAFCC 64 should clean up this message and send a response to the PAFDC 62 confirming its action, therefore if an excessive time has passed this procedure places an instruction into the list of messages to be sent to the PAFCC 64 to correct this error condition. Processing then proceeds to jump directive Loop 958, which brings the flow to the Loop 902 (see FIG. 20A) label to process the next account to be processed for the client. If MNLogic has a non-zero value processing flow proceeds via path<>0.0 960 to test variable OldMNLogic 962. If OldMNLogic 962 equals the value of MNLogic processing, no new message has to be sent, therefore flow proceeds via path=MNLogic 964 to procedure CheckTimeout 966 which has been described at 956. Processing then proceeds to jump directive Loop 968, which brings the flow to the Loop 902 (see FIG. 20A) label to process the next account to be processed for the client. If OldMNLogic 962 does not equal the value of MNLogic processing flow proceeds via path<>MNLogic 970 to procedure DecideNewMessage 972 which places the recommended message or a modified message into the list of messages to be sent, depending on the relationship of the new message to the old (For example the prior message may have advised that an account would be overdrawn if $1000 weren't immediately transferred to it. New information indicating that now $2000 would have to be transferred into the account would produce a message to that effect.). Processing then proceeds to jump directive Loop 974, which brings the flow to the Loop 902 (FIG. 20A) label to process the next account to be processed for the client.

Detailed Description Text (250):
If the value of OldMNLogic 980 is 0, we can conclude that this response is not related to a pending message, and processing flow passes via path=0.0 982 to test variable MNLogic 984. If MNLogic has a 0 value, no new notice message is recommended, so processing flow proceeds via path=0.0 986 to procedure ClientRequest 988. The procedure determines if the PAFCC 64 has generated the response, or the client has initiated a request and acts accordingly by initiating a transaction, message, and/or update of its state information. Processing then proceeds to jump directive Loop 990, which brings the flow to the Loop 902 (see FIG. 20A) label to process the next account to be processed for the client. If MNLogic 984 has a non-zero value processing flow proceeds via path<>0.0 992 to procedure ClientRequestAndNewMessage 994 which, in addition to performing actions similar to those done by ClientRequest 988, must consider the new notice message content in formulating its action. Processing then proceeds to jump directive Loop 996, which brings the flow to the Loop 902 (see FIG. 20A) label to process the next account to be processed for the client.

Detailed Description Text (251):
If the value of OldMNLogic 980 is not 0, then processing flow passes via path<>0.0 998 to test variable MNLogic 1000. If MNLogic 1000 has a 0 value processing flow proceeds via path=0.0 1002 to procedure StartTransactionAndCheckTimeout 1004 which verifies that the response is timely and relates to the pending message that had been sent (OldMNLogic 980<>0). Then depending on whether the response indicates a PAFCC 64 instruction, client initiated request, late response, or timely response to the message sent, the procedure provides the appropriate action, such as initiating the transaction solicited by the message sent. Processing then proceeds to jump directive Loop 1006, which brings the flow to the Loop 902 (see FIG. 20A) label to process the next account to be processed for the client. If MNLogic 1000 has a non-zero value processing flow proceeds via path<>0.0 1008 to test variable OldMNLogic 1010. Processing now proceeds in similar manner as described above at OldMNLogic 962 (see FIG. 20B) only now taking into account the fact that a response has been received (RNLogic 930<>0). First it must be verified that the response doesn't indicate a PAFCC 64 instruction or client initiated request, Next if not a late response, then a transaction most likely should be initiated.

Detailed Description Text (252):

In similar manner the paths for OldTNLogic 918 (see FIG. 20A), TANLogic 922 (see FIG. 20A), and OldRNLogic 926 (see FIG. 20A) are processed for all possible combinations. Likewise, other account types such as Savings 916 (see FIG. 20A) has its own logic tree for processing clients with actions appropriate to that type of account. When all accounts for a client have been individually processed without regard for interactions between accounts, processing exits task CheckOldActions 828 via path Done 830 and proceeds to task CheckCommonality 832 on FIG. 19. CheckCommonality 832 uses a similar tree structured logic to examine the interrelationships of multiple transactions, responses, and messages within and between accounts for the client if more than one are currently being processed. Where conflicts are discovered, they are resolved via predefined business rules and the transactions and messages modified accordingly.

Detailed Description Text (254):
Variable SendM 1020 is set true in task DecideAction 716 if a message is to be sent, otherwise it is set to false. If SendM's value is false, processing proceeds via path false 1022 to jump directive SkipM 1024, which brings the flow to the SkipM 1026 label. If SendM's 1020 value is true, processing proceeds via path true 1028 to task SendMessage 720 which queues up the messages to be sent to the PAFCC 64. Processing then proceeds via path All values 1030 and label SkipM 1026 to test the value of variable SendT 1032 whose value is also set in task DecideAction 716. If no transactions are to be initiated, SendT will be false and processing proceeds via path false 1034 to jump directive SkipT 1036, which brings the flow to the SkipT 1038 label. If SendT's value is true, processing proceeds via path true 1040 to task SendTransaction 722 which initiates the transactions determined by DecideAction 716. Processing then proceeds via path All values 1042 and label SkipT 1038 to task UpdateActionHistory 724 which stores all actions taken in non-volatile memory. Standard transaction processing (as known in the art) is used throughout, so that if any processing can not be completed, the process is rolled back so that an accurate record of the current state is always known. Processing then proceeds via path All values 1044 to outcome Done 748 (see FIG. 16) of task SendData 718.

Detailed Description Text (255):
Although the preferred embodiment as described uses scanning of the list of subscribers at prescribed intervals, it is appreciated that asynchronous event triggering and asynchronous scanning of subscribing clients is equally included within this invention. Likewise the separation of deciding on each account separately for notifications and then reviewing those notifications collectively to remove conflicts, ambiguity, or any other nuance that produces a less than desired effect, rather than combining these operations does not limit the scope of this invention. Sending all notifications generated up to the time of an interrupting immediate notice requirement is also just a variation on implementation. It is within the scope of the invention to send just the interrupting notice with or without any generated notices for that client, and then continue the normal processing.

Detailed Description Text (259):
A decision making component--S-DM 1110 or R-DM 1112--is intended to make decisions appropriate to its context in the "CDMC network" and may rely on a variety of technical implementations to make these decisions. For example, an S-DM 1110 might use a database trigger and embedded SQL logic and/or external rules contained in another database to determine if "interesting" data has been updated, inserted or deleted from the database it monitors. R-DM's 1112 might be responsible for distributing updates to databases based on destination. An S-DM 1110 responsible for deciding over what channel to send an Push would read customer profiles. An S-DM 1110 responsible for evaluating and reconciling customer interest profiles and potentially Pushable data might employ an AI engine.

Detailed Description Text (261):
CDMCs 1100 are intended to be connected by various means. For example, CDMCs 1100

can be connected to each other on an internal network, to data sources such as 1) databases via native database APIS, ODBC, JDBC, etc., or 2) news feeds via dial-up or whatever method supported by the feed, to network file systems for file access, etc.

Detailed Description Text (264):
Three kinds of data sources are depicted in the column labeled Legacy Agents 1201, data extracted from line of business database 1202, direct access to line of business database 1204 and a data feed 1206. In all of these cases, each D-CH 1104 provides the connectivity between the CDMC 1100 and the data source. For example, perhaps the data extract is a flat file located in the networked file system and is read line-by line and parsed; perhaps the directly-accessed database-base has 1) a native API installed in its corresponding CDMC's 1100 D-CH 1104 or 2) uses a database-based trigger to detect updates; perhaps the data feed sends information to the CDMC 1100 via TCP/IP.

Detailed Description Text (273):
The customer responds to the Push message and his response returns to the system through his device's D-CH 1252, and the designated channel, arriving at a CDMC configured as a PAFCC that accepts responses. (The customer could also phone a CSR. This CDMC's R-DM determines the nature of the message (for example, response to the Push message, profile update requested by a customer) and routes the data (through the CDMC network for a response or initiating the challenge-and-response message for profile update requests). Based on rules associated with the R-DMs along the chain, the response is ultimately sent to the CDMC responsible for effecting the transaction, being cached and routed as necessary. Profile updates can also be sent along the CDMC network according to the type of update--customer channel updates, group and surrogate information, customer/data relationships.

Detailed Description Text (298):
The following commands will be available in the application menu: Move: Up: same as UP key Down: same as DOWN key First: the highest-priority message Last: the lowest-priority message View: Creation Date: shows the creation date of the current message Stale Date: shows the stale date of the current message Settings: Quiet: a checkable option to suppress the alarm Features: pops up a Feature dialog box Purge: Remove messages that are past their stale dates or have been replied to by the customer.

Detailed Description Text (302):
PalmPilot security follows the general principles of Internet Dock security. The PalmPilot dock driver encrypts and digitally signs all downstream messages using public-key technology before transmission. The messages are decrypted, and the signature verified, just before the message is to be displayed to the customer. Messages that cannot be decrypted or that fail signature verification cause an error message to be sent upstream and the customer to be notified. The PalmPilot database stores the messages only in encrypted form.

Detailed Description Text (305):
The following XML Document Type Definition (DTD) describes the format of Push message PAF documents. PAF documents are intended to be parsed as if they contained the following declaration: <!DOCTYPE PAF SYSTEM "paf.dtd">, where paf.dtd has the following contents: <!-- DTD Draft 1.0 for Push Message PAF documents <!-- These are the element types that can be found. <!ELEMENT PAF (ID, CD?, TO?, DA?, PR?, SD?, MT?, RT?, AD?, RE?, ER?, CF?)> <!-- This means that ID is first and is required, and all the others are optional but MUST appear in the specified order. In particular uses, some of them are NOT optional: thus PAFDC 64 output must include SD and MT, and dock drivers will be helpless if their input doesn't contain DA. --> <!ELEMENT ID (#PCDATA)> <!ELEMENT CD (#PCDATA)> <!ELEMENT TO (#PCDATA)> <!ELEMENT DA (#PCDATA)> <!ELEMENT PR (#PCDATA)> <!ELEMENT SD (#PCDATA)> <!ELEMENT RT (#PCDATA)> <!ELEMENT AD (#PCDATA)> <!ELEMENT RE (#PCDATA)> <!ELEMENT ER (#PCDATA)>

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<!ELEMENT CF (#PCDATA)> <!-- All of these contain just characters, possibly with
numerical references like &#nnn; and a few general references like < and > mixed
in. There are lots of specific rules about their format, but XML can't cope with
those rules, and treats them as plain character data. --> <!ELEMENT MT
(#PCDATA .linevert split. RT)*> -- MT elements can contain text and any number of
RT elements mixed together in any arbitrary way. --> <!-- These are the attributes
that elements can have. Elements that aren't mentioned here don't have any
attributes. --> <!ATTLIST MT xml:lang NMTOKEN #IMPLIED CODE NMTOKEN #REQUIRED> <!--
MT elements have two attributes, xml:lang (which is lowercase because the XML spec
defines it) and CODE. Both are alphanumeric values, or NMTOKENs in XML jargon. If
xml:lang is missing, an application-specific value is implied. If CODE is missing,
it's an error. --> <!ATTLIST RT KEY NMTOKEN #IMPLIED> <!-- RT elements have one
attribute, KEY. It's an alphanumeric value (NMTOKEN). If it's missing, an
application-specific behavior results (namely, there is no key for this return
value). --> <!-- Declarations needed for XML/SGML compatibility. XML systems will
work fine without these, but old SGML systems may not. --> <!ENTITY lt "&#60;"> <!
ENTITY gt ">"> <!ENTITY amp "&#38;"> <!ENTITY apos "'"> <!ENTITY quot """>
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Detailed Description Text (307):
The following general rules apply to this discussion:

Detailed Description Text (324):
The elements within the PAF element must appear in the order specified in the
table. Only the ID element is required, but if any of the others appear, they must
be in the given order, and at most one element of each type is allowed. These rules
do not apply to RT elements when they are nested inside an MT element.

Detailed Description Text (326):
The following is an example of a downstream document. This document has already
been processed by the PAFCC 64, as it contains a DA element: <PAF> <ID>asdfjkl</ID>
<CD>19980201T080500</CD> <TO>Customer24</TO> <DA>Skytel/142857</DA> <PR>.9</PR>
<SD>19980201T090500</SD> <MT xml:lang=en CODE=125>You have too much money in your
401-K account. How much should we move? <RT KEY=1>100%</RT> <RT KEY=2>50%</RT> <RT
KEY=3>0%</RT> </MT> </PAF>

Detailed Description Text (348):
Since the number of outgoing messages may exceed the capacity of the transmitting
equipment, the Server 1300 is able to prioritize outgoing message based on
criticality level and stale time. The server 1300 can also serve as a repository
for messages that, because of device memory constraints, have been deleted from the
device. In this event, the customer can view messages upon requesting that they be
delivered from the Server 1300 to their device. Should the Server 1300 not be able
to transmit a message before its stale date is reached, it will inform the Response
Router 1304 of this condition. The Server 1300 then removes the message from its
message queue and marks it accordingly.

Detailed Description Text (365):
FIG. 26 illustrates an example where multiple XML messages are received
asynchronously. The customer does not view the original message and, consequently,
an updated transaction is sent and original message is removed from the message
queue.

Detailed Description Text (366):
The following describes the functionality of the Internet Dock side of the system
(traditionally called the client). An Internet Dock is responsible for receiving
messages from the Server 1300, processing the customer's responses, and
transmitting the response back to Server 1300. This section only addresses the
application on the customer's system, and not on the transmission side. This
application, hereafter referred to as Dock, is a smart Dock, capable of offering a
wide range of services to the customer. The Dock resides on a customer's

intelligent device. The Dock supports the following services: Receive and display messages; Allow the customer to respond to "push" messages, process them, and transmit responses to the Server 1300; Encrypt all transmissions Automatically alert the customer to incoming messages; Prioritize multiple incoming messages; Allow the customer to <u>view</u> off-line previously received messages that were not responded to; Allow the customer to <u>view</u> processed responses (i.e., messages and their responses) and confirmation information; Automatically delete historical processed messages at a predefined date; Allow the customer to delete historical processed messages. Provide the Server 1300 with the status of the transmitted message; Allow the Server to automatically delete and reprioritizes messages that were not viewed by the customer; Support an alternative applet security implementation (i.e., applet mating); and Allow the customer to initiate communications with operator of the Server 1300 to change their customer profile.

<u>Detailed Description Text</u> (371):
If multiple messages are received concurrently, the Dock prioritizes these messages based on their priority level. After a message has been processed, the next message is displayed for the customer to respond. All subsequent messages are processed in this fashion. If the customer chooses to <u>view</u> messages off-line, then the unprocessed messages are displayed first in priority order, followed by processed messages.

<u>Detailed Description Text</u> (372):
The Dock allows the customer to <u>view</u> unprocessed messages off-line. The customer chooses the unprocessed message option to enter this mode. Once selected, the messages are displayed in priority order. The Dock will also display a notification dialog box, reminding the customer they have unprocessed messages in the queue. Should the customer reconnect (i.e., on-line) when <u>viewing</u> previously received message, the unprocessed messages are displayed first, unless the new messages have a priority that supersedes all messages.

<u>Detailed Description Text</u> (373):
The Dock maintains a historical <u>database</u> of processed messages along with their responses and confirmation. Each message is date and time stamped. Should multiple messages be received for the same <u>transaction,</u> these messages will be group by date order. The customer has the option of <u>viewing</u> a list of all the messages, with a brief description, selecting a <u>transaction, and then viewing</u> the details of each message.

<u>Detailed Description Text</u> (377):
The Dock will allow the Server 1300 to delete and reprioritizes any messages that were received by the Dock, but not viewed by the customer. For example, a message is received stating "your <u>account</u> is overdrawn by $2 million dollars", along with appropriate responses, but the customer has chosen not to read it. Subsequently, another message for the same <u>account</u> is received with a different amount. The Dock will delete the original message and forward the new message. The Dock will inform the customer of this change. Additionally, if a message is received with a different priority, the Dock will automatically reprioritize any messages not viewed by the customer.

<u>Detailed Description Text</u> (385):
The Applet Viewer 1404 is directly responsible for displaying the "push" message and capturing the customer's response. It is also responsible for displaying both stored unprocessed and processed messages. This method of processing allows the customer to <u>view</u> messages off-line. The Applet Viewer 1404 consists of nine objects: Transmitter/Receiver; Decryption; Formatter; DisplayApplet; ResponseExtractor; Encryption; MessageHandler; GUI Viewer Vcontroller;

<u>Detailed Description Text</u> (392):
The System must ensure that a high level of security exists whenever the device can

support it. The Dock 1400 will support the recommend security standard. For example, if an XML message is sent to the Dock 1400, the original message will be encrypted at the originating site prior to transmission. Thus any message must be first be decrypted by Decryption 1410 object prior to its use. When a message is first received, this object will retrieve the encryption key from the System Information Database 1428 and then apply it to the message header, which contains the PIN. This information is then sent to the DisplayApplet 1414 object. Once the customer's PIN has been validated, the DisplayApplet 1414 informs this object and the message contents are then decrypted. The decrypted message is then sent to the Formatter 1412. The process is repeated for each message. This object 1410 also decrypts previously unprocessed and processed messages in the Push Message queue 1426.

Detailed Description Text (398):
The Encryption object 1418 is responsible for encrypting the XML response document for transmission to the Server. It is uses the encryption key stored in the System Information Database 1428.

Detailed Description Text (399):
The GUIViewer object 1422 is responsible for three principal functions. First it displays unprocessed and processed messages. Processed message are first retrieved from this object and then sent to the DisplayApplet 1414 object for processing. The historical processed messages are displayed in a list and then the customer has the option of viewing the details (e.g., original message, response, confirmation, and date/time stamp). This object also displays the confirmation and error messages, as well as providing navigational options (e.g., menus, lists, etc.).

Detailed Description Text (400):
Second, the GUIViewer 1422 localizes the object will localize the display and controls (e.g., menus and text fields). This object will determine the locale by the version of the customer's computer operating system. The option also exists to localize the GUI, based on the customer's profile, independent of the operating system. The XML message format includes provisions for localizing the message. Locale information can be stored in resource files or in the System Information Database 1428.

Detailed Description Text (420):
Monitoring of messages requires the MessageHandler 1516 to either determine it a response has been received for "push" message or analyzing response. If a response has not been received during a specified time, the MessageHandler 1516 will either have the message retransmitted or remove the message from the message queue 1528. In any event, the Response Router 1506 is informed of the action. If a response has been received, the MessageHandler 1516 determines if a message should be retransmitted, wait for additional status updates, or remove the message from the message queue. For example, communication errors would require that a message be retransmitted. Status updates, such as "message has been received", requires the MessageHandler 1516 to keep monitoring for a customer response. Whereas customer responses are formatted (e.g. date and time received are added) forwarded to the UpstreamHandler 1522 and then delete from the message queue 1528. Note the MessageHandler 1516 must poll the paging company's database to obtain the status and/or message.

Detailed Description Text (431):
Metanetworking requires features ordinary network don't have 1) The Sender's reasons for sending a message, the Receiver/Responder's rules for accepting messages and the actual content of the message must be stored in profiles, queues and caches and constantly be re-evaluated across the dimension of Time and vis-a-vis the capabilities of the standard communications networks (e.g. via artificial intelligence control tools). 2) All existing networks must be accessible to the metanetwork in order to optimize message delivery. 3) Once a message is responded

to or goes "stale" copies of it in other networks or on other devices must be cleaned out of the system. 4) Messages must be reprioritizable "on the fly" in order to respond to changing situations of the Sender and/or Receiver.

Current US Class (2):
705

CLAIMS:

13. A method as recited in claim 12, wherein the information is related to at least one account of the subscriber, the method further comprising altering the at least one account of the subscriber in response to the response from the subscriber.

16. A method as recited in claim 15, wherein the subscriber has accounts at a financial institution and wherein the monitoring step includes monitoring the accounts.

17. A method as recited in claim 15, wherein the method is performed on a system and wherein the monitoring step includes monitoring databases within the system and monitoring external data sources.

18. A method comprising: identifying information related to a subscriber's account; creating a message containing the information; embedding the message in an applet, the applet providing functionality for the subscriber to display the message, to respond to the message, and to alter the subscriber's account; and transmitting the applet to the subscriber.

21. A method a recited in claim 19, wherein the information is related to at least one account of the subscriber, the method further comprising: altering the at least one account of the subscriber in response to the response from the subscriber.

22. A method of communicating with subscribers to a system, the method comprising: establishing subscriber profiles for a plurality of subscribers, the subscriber profiles containing information related to subscriber identification, preferred channels of communication and alternative channels of communication; periodically scanning at least one of databases internal to the system and data sources external to the system for first information which affects any of the plurality of subscribers; actively monitoring at least one of the databases internal to the system and data sources external to the system for updates and identifying second information which affects any of the plurality of subscribers; determining if any of the first and second information should be communicated to any of the plurality of subscribers, any such information so determined being denoted as determined information; creating at least one message containing the determined information; identifying at least one of the plurality of subscribers to which the determined information should be communicated; retrieving from the subscriber profile, the information related to the preferred channels of communication for the at least one of the plurality of subscribers; formatting the at least one message for the preferred channels of communication for the at least one of the plurality of subscribers; encrypting the at least one message; assigning a time at which the at least one message will become stale; transmitting the at least one message over the preferred channels of communication for the at least one of the plurality of subscribers; monitoring for receipt of an acknowledgement of successful transmission of the at least one message over at least one of the preferred channels of communication for the at least one of the plurality of subscribers; if an acknowledgement is not received in a first predetermined time, retrieving from the subscriber profile the information related to the alternative channels of communication for the at least one of the plurality of subscribers, and transmitting the at least one message over the alternative channels of communication for the at least one of the plurality of subscribers; monitoring for receipt of a response from the at least one of the plurality of subscribers; if the

response from the at least one of the plurality of subscribers has not been received in a second predetermined period of time, retransmitting the at least one message over at least the preferred channels of communication for the at least one of the plurality of subscribers; terminating the retransmission step if the at least one message has become stale; receiving the response from the at least one of the plurality of subscribers; and authenticating the response from the at least one of the plurality of subscribers.

23. A method comprising: identifying information related to at least one account of a subscriber; identifying at least one channel of communication with which to communicate with the subscriber; creating a message containing the information, the message further containing response information enabling the subscriber to generate and transmit a response; transmitting the message to the subscriber on the at least one channels of communication; receiving a response to the message from the subscriber; and altering the at least one account of the subscriber in response to the response from the subscriber.

24. A system for communicating with a subscriber to the system, the system comprising: an information identification module identifying update information related to the subscriber; a subscriber database containing channel information which identifies at least two different channels of communication with which to communicate with the subscriber; a message generation module coupled to the information identification module and generating a message containing the update information, the message further containing response information enabling the subscriber to generate and transmit a response to the message over at least one of the two channels of communication; and a communication layer coupled to the message generation module, the communication layer including interfaces to the at least two channels of communication, the communication layer transmitting the message to the subscriber contemporaneously on the at least two different channels of communication.

36. A system as recited in claim 35 wherein the update information is related to an account of the subscriber, the system further comprising an alteration module coupled to the response module, the alteration module altering the account of the subscriber in response to the processing of the response by the response module.

39. A system as recited in claim 38, wherein the at least one data source is an account information data source at a financial institution.

40. A system as recited in claim 38, further comprising an external database interface, wherein the information identification module is coupled to the external database interface and monitors the external database for the update information.

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